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managed by Brookhaven Science Associates  
for the U.S. Department of Energy

Mr. Brian Jankauskas  
New York State Dept. of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway – 12<sup>th</sup> Floor  
New York, New York 12233-7051

September 7, 2021

Ms. Sharon Hartzell  
Federal Facilities Section  
U.S. EPA – Region II  
290 Broadway – 18<sup>th</sup> Floor  
New York, New York 10007-1866

Dear Mr. Jankauskas and Ms. Hartzell:

**SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) INTERAGENCY  
AGREEMENT (IAG) – MONTHLY REPORT FOR AUGUST 2021**

In accordance with the Interagency Agreement (IAG) for Brookhaven National Laboratory (BNL), enclosed is the Monthly Report for August 2021 covering the Long-term Stewardship (LTS) areas listed below:

- Brookhaven Graphite Research Reactor (BGRR) Surveillance and Maintenance
- High Flux Beam Reactor (HFBR), including the Waste Loading Area (WLA) Surveillance and Maintenance
- Soil and Water Remediation

If you have any questions, please call Gerald Granzen at (631) 344-4089.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Dorsch", with a stylized flourish at the end.

William Dorsch, Manager  
Groundwater Protection Group

Enclosure, as stated:

cc: w/encl.

P. Armani, NYSDEC  
C. Costello, NYSDOH  
D. O'Hehir, NYSDOH  
S. Rushford, NYSDOH  
A. Rapijko, SCDHS  
J. Wanlass, SCDHS  
M. Soucie, NYSDOH  
D. Pocze, EPA

J. Carter, BHSO  
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G. Olson, BHSO  
C. Polanish, BHSO  
J. Remien, BSA  
S. Coleman, BSA  
R. Howe, BSA  
D. Paquette, BSA  
V. Racaniello, BSA  
File: GWER 17.1.21

**Brookhaven National Laboratory  
Interagency Agreement (IAG) Monthly Report  
August 2021  
Long Term Stewardship (LTS) Activities**

**BROOKHAVEN GRAPHITE RESEARCH REACTOR (BGRR) SURVEILLANCE AND  
MAINTENANCE**

**Current Month Technical Performance Analysis**

***Accomplishments and/or Technical Achievements***

- Conducted routine surveillance and maintenance (S&M) activities.
- Participated in a BNL 500-A environmental review meeting for a proposed science research project that will include equipment and structures on the BGRR roof.

***Highlights of any changes to objectives and description of any changes in technical approach***

- None.

***Key Issues***

- None.

**Planned Actions for the Next 90 Days**

- Continue S&M activities.

**HIGH FLUX BEAM REACTOR (HFBR) INCLUDING, STACK, GROUNDS, AND WASTE  
LOADING AREA (WLA) SURVEILLANCE AND MAINTENANCE**

**Current Month Technical Performance Analysis**

***Accomplishments and/or Technical Achievements***

- BSA and BHSO participated in the weekly stack demolition coordination teleconferences with the Army Corps of Engineers (USACE) and DOE's Office of Environmental Management (EM).
- The USACE and contractor briefed the regulators on the status of the stack demolition during the 8/5/21 IAG monthly teleconference.
- Contractor completed remaining soil excavation adjacent to the pedestal and scrubbing and flushing of pedestal drain lines.
- The contractor initiated the final status survey (FSS) which includes the walkover survey and soil sampling, and Oak Ridge Institute for Science and Education (ORISE) arrived on-site 8/5/21 to initiate the independent verification surveys of the stack cleanup. The contractor completed the FFS and ORISE completed approximately 80% of the independent verification survey.

- There has been no Community Air Monitoring Plan (CAMP) PM-10 monitoring or silica sampling during the FSS activities. CAMP monitoring will resume when backfilling activities begin.

***Highlights of any changes to objectives and description of any changes in technical approach***

- None.

***Key Issues***

- The excavation areas will be backfilled following favorable FSS walkover survey results from the contractor and ORISE.
- Continue to perform the remaining project activities safely.

**Planned Actions for the Next 90 Days**

- Continue S&M activities.
- ORISE to complete their independent verification survey (walkover survey and soil sampling) of the former stack area the first week in September.
- Contractor to grout the pedestal drain lines following ORISE completion of their independent verification walkover survey.
- Contractor to conduct off-site disposal of the water generated from the stack exterior coating abatement.
- Contractor to prepare and issue the draft Closeout Report for BSA, DOE and USACE review prior to submittal to the regulators.

**SOIL AND WATER REMEDIATION**

**Current Month Technical Performance Analysis**

***Accomplishments and/or Technical Achievements:***

- The IAG monthly teleconference was held 8/5/21 and included updates on the HFBR stack and Building 650 demolition, and a groundwater characterization update.
- Received NYSDEC/NYSDOH and SCDHS comments on the Five-Year Review Report 8/4/21 and 8/20/21, respectively. Responses are being prepared. Received EPA's protectiveness letter 8/6/21.
- Received NYSED/NYSDOH comments on the 2020 Groundwater Status Report 8/16/21. Responses are being prepared.
- Work continued on the PFAS Time Critical Removal Action (TCRA) groundwater remediation including:
  - The contractor initiated field work with the installation of Current Firehouse extraction well CF-RW-B and various material deliveries to the site.
  - Received NYSDEC concurrence 8/5/21 on responses to comments on the PFAS Source Area Remediation Design Report. A revised Design Report will be issued.

- Continued to install eight temporary wells using the Geoprobe south of West Princeton Avenue to characterize downgradient extent of PFAS identified on the western portion of the plume.
- Began installation of 12 monitoring wells in the southwestern portion of the site to better define groundwater flow directions within source water contributing area of the William Floyd Wellfield and for improved groundwater quality surveillance. This work is being performed with additional FY21 lab overhead funding.
- Coordinating with BSA riggers to have the carbon vessels installed in Building 492 for the planned Current Firehouse PFAS groundwater treatment system.
- The Middle Road Groundwater Treatment System was shut down due to a malfunctioning component in the programmable logic controller that operates the system. The new part was installed, and the system was restarted.
- Extraction well EW-1 at the OUVI EDB Groundwater Treatment System stopped operating. The BNL electricians will evaluate the cause.
- Performed a carbon change-out at the OU VI EDB Groundwater Treatment System 8/3/21.
- An ion-exchange resin vessel change-out for the BGRR Sr-90 Groundwater Treatment System was performed 8/31/21.
- Repairs were completed to the fence at the former Hazardous Waste Management Facility (HWMF) and clearing of overgrown vegetation at the former Meadow Marsh cleanup area. Work planning to repair the gates at the former HWMF Waste Loading Area was initiated.
- DOE issued letters 8/25/21 to the four homeowners not hooked up to public water offering free annual testing of their private wells.
- Soil samples were obtained of the area adjacent to and north of former Building 650.

***Highlights of any changes to objectives and description of any changes in technical approach***

- None.

***Key Issues***

- The Laboratory continued COVID-Phase 2 operations. The Groundwater Protection Group (GPG) maintained minimal staff working on-site to manage field activities. All other GPG staff continue to work remotely.
- Completed installation of three vertical profile (VP) wells for the OU 3 Middle Road plume and two VPs for the OU III South Boundary plume. This work was recommended in the Five-Year Review and is being performed with additional FY21 lab overhead funding.

**Planned Actions for the Next 90 Days**

- The Laboratory and GPG will continue COVID-Phase 2 operations.
- The monthly IAG teleconference is scheduled for 9/2/21 and will include updates on Building 650 and HFBR stack post-demolition cleanup, the upcoming Community Advisory Council (CAC) meeting and a groundwater update.
- The CAC meeting is scheduled for 9/9/21 and will include a brief stack update and a presentation on the status of PFAS characterization and planned remediation activities.
- Contractor to continue installing the PFAS Source Area Groundwater Remediation Systems extraction wells.

- Surveyor to field mark the locations followed by the installation of 83 monitoring wells associated with the PFAS Source Area Groundwater Remediation Systems.
- Install the carbon vessels in Building 492 for the planned Current Firehouse PFAS groundwater treatment system.
- Prepare revision of the TCRA PFAS Characterization Report to incorporate data from the additional temporary wells installed during April-September, and editorial comments received from NYSDEC/NYSDOH.
- Install additional Geoprobe wells north of West Princeton Avenue, including installing Geoprobe wells in the open field west of the Current Firehouse to determine whether PFAS containing foam had been used in this area.
- Restart the BGRR Sr-90 Groundwater Treatment System following the recently completed resin vessel change-out.
- Prepare and submit Closeout Report for Building 650 demolition to the regulators.
- The BNL Water and Sanitary Planning Team is schedule to meet 9/7/21.